

# Decoding Greenwashing: How Young Adults Perceive and React to Sustainability Claims on Social Media

Honors Thesis

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## Abstract

As the impacts of climate change intensify globally, consumers increasingly expect companies to adopt more socially and environmentally responsible business practices. Yet, as companies are incentivized to act sustainably, many engage in greenwashing– the practice of exaggerating or falsifying their environmental claims. This study investigates how young adults aged 18-24 encounter greenwashing on social media and how such exposure shapes their attitudes and consumer behavior. An online survey was administered to assess participants' daily social media use, recognition and understanding of greenwashing, and responses to sustainability-related claims. Participants reported extensive daily social media use and frequent exposure to environmental messaging through influencer and product marketing. Participants often struggled to distinguish between misleading claims and honest sustainability efforts. Although most respondents reported they would avoid a product or brand if they suspected greenwashing, 67% had not done so in practice, revealing an attitude-behavior gap. Perceptions varied with sustainability knowledge but respondents consistently expressed interest in companies' efforts to limit post-consumer waste, lower greenhouse gas emissions, decrease energy use, and minimize upstream and downstream operational impacts. Across respondents, concern about deceptive marketing and a strong preference for brand integrity emerged. Consumers would prefer for brands to be honest about the challenges they face in making their practices more sustainable, rather than overstate their sustainability initiatives. Specifically, participants wish to see greater transparency in sourcing, manufacturing, stakeholder engagement, and labor practices. Overall, the findings emphasize a need for improved consumer education on sustainability and stronger corporate transparency, highlighting the dual role of informed consumers and responsible companies in mitigating greenwashing.

## 1. Introduction

With the impacts of climate change continuing to hit countries around the world, there is a higher demand for more socially and environmentally responsible business practices. From ingredient sourcing, to product manufacturing, and post-consumer waste, consumers are expecting more from the businesses they purchase from. A global survey by Nielsen Media Research reports that 66% of global consumers are willing to pay more for environmentally-friendly products compared to the traditional alternative (de Freitas Netto, 2020). From a business perspective, customer satisfaction is linked with customer loyalty, incentivizing companies to create more eco-friendly products and make their business practices more sustainable (Ioannou et al., 2023). Ultimately, consumers want to feel good about the businesses they are supporting. If consumers believe a company is being socially responsible and making their practices more environmentally friendly, they are more likely to continue purchasing from a company. However, as companies are increasingly incentivized to adopt sustainable practices, many engage in greenwashing— the practice of exaggerating or falsifying their environmental claims. It should be noted that while greenwashing more intensely falsifies environmental claims, sustainability is broader, encompassing key social and economic factors as well. Thus, when this study refers to sustainability, it adopts a comprehensive understanding of the term that includes not only environmental dimensions but also the relevant social and economic considerations of business.

As stated by the Oxford Dictionary, greenwashing may be defined as “disinformation disseminated by an organization so as to present an environmentally responsible public image; a public image of environmental responsibility promulgated by or for an organization, etc., but perceived as being unfounded or intentionally misleading” (de Freitas Netto, 2020). Currently,

the United States lacks a comprehensive framework to limit greenwashing, like that of the European Union, making it easier for firms to employ greenwashing in the marketing techniques (File, 2023). Simultaneously, consumer skepticism has risen as it becomes increasingly difficult to determine the reliability of sustainability claims.

In the digital age of social media, young consumers are particularly exposed to environmental claims through online product marketing by brands and influencer partnerships. This can potentially amplify the reach of greenwashing practices. Understanding how social media and online marketing spreads or normalizes greenwashing is essential for learning to minimize it. This study aims to explore how young consumers (ages 18-24) encounter, interpret, and respond to greenwashing on social media. Specifically, it aims to examine how often they are exposed to such content, their awareness of greenwashing techniques, and how these factors influence their attitudes and behaviors (e.g. how do individuals react and respond to dishonest product messaging when they recognize it). Thus, this thesis seeks to answer the following research questions:

1. How do consumers assess the legitimacy of sustainability claims on social media?
2. How does influencer marketing impact purchasing behavior related to sustainable products?
3. What is the relationship between trust, sustainability, and consumer behavior as young people encounter more greenwashing over time?

Learning the answer to these questions is important in informing efforts to reduce deceptive practices within advertising, increasing transparency and consumer protection, and enhancing education on the presence of greenwashing in online marketing. Consumers hold market power with their purchasing decisions as they choose which companies to support with

their money. As such, consumers play a significant role in advancing sustainability initiatives by purchasing from companies with honest sustainability agendas. Understanding how consumers make decisions about their product choices can reveal where young adults need more support in distinguishing between greenwashing and genuine sustainability claims. Ultimately, both consumers and companies will need to work together to mitigate greenwashing and demand authenticity in sustainability marketing.

## **2. Relevant Literature**

The rise of environmental awareness, particularly among young adults, has influenced consumer behavior and encouraged companies to act more sustainably. However, an influx of dishonest claims related to the environmental benefits of a product, or sustainable actions of a company, has made it difficult for consumers to determine the credibility of a sustainability claim. This literature review examines research on greenwashing, green literacy, the role of social media in marketing, and consumer behavior. This literature review is organized into four sections. First, greenwashing, its various forms, and its prevalence in marketing. Second, the role of green literacy and how it can shape consumer behavior. Third, incentives for companies to limit their greenwashing. Fourth, the importance of social media in advancing collective action. Finally, gaps in the literature, highlighting the need for additional research on how young consumers are exposed to greenwashing on social media. By synthesizing these areas of research, this review provides the foundation for the present study, which explores how young adults recognize, respond to, and are influenced by greenwashing in online marketing contexts.

## 2.1 Understanding Greenwashing

Greenwashing can have multiple definitions but is most commonly defined as deceptive practices that present a product, brand, or service as more environmentally friendly than it actually is, often misleading consumers into purchasing more of a product or service (Ozel, 2025). Greenwashing can occur through different processes with selective disclosure being one of the most common forms of greenwashing strategies. Selective disclosure is the combination of withholding information regarding a company's environmental performance while simultaneously exposing positive information about their environmental performance (de Freitas Netto et al., 2020). Selective disclosure can be difficult to identify. By overstating positive efforts, companies are able to distract from their shortcomings and mislead consumers by creating an overly positive corporate image.

Additionally, greenwashing also occurs through claim and executional greenwashing. Claim greenwashing consists in textual statements that explicitly or implicitly refer to the environmental benefits of a product or service. The statements can contain false claims, omit information, or use vague and ambiguous language in a product claim. For example, vague language might consist of stating that a product is "natural" or "eco-friendly". Ultimately, these false claims are used to enhance sales of a product, protect brand image, or describe the sourcing and manufacturing processes of a company in a positive way (de Freitas Netto et al., 2020). Alternatively, executional greenwashing employs nature-evoking elements such as color (typically green or blue), or images of animals, natural landscapes, and renewable energy sources to develop a sense of environmental consideration without having any actual connection to supporting nature. Ultimately, these elements imply a false-sense of environmental action by activating implicit references to nature through imagery (de Freitas Netto et al., 2020). While

companies using executional greenwashing may not explicitly state false claims, the nature-evoking elements connect with consumers in a similar misleading way.

## 2.2 The Role of Green Literacy in Encouraging Behavior Change

Traditionally, access to education on environmental issues has been a barrier to pro-environmental action (Kollmuss, A., & Agyeman, J., 2002). A lack of environmental knowledge also contributes to consumers being more likely to support products, brands, or services that utilize greenwashing. As young consumers interact with the marketing content they find on social media, it is becoming increasingly important that they possess “green literacy”. This concept may be defined as the “ability to be aware of, critically analyze, and evaluate how a company’s environmental image affects the audience’s perspective on the environment and environmental decision-making process” (Ozel, 2025, p. 350). Having green literacy is increasingly necessary for young consumers as it provides a defense against greenwashing and misleading environmental claims. Green literacy also includes having a foundational knowledge of ecosystem interactions, environmental problems, and how human activity is exacerbating these problems (Ozel, 2025). If young consumers have green literacy, greenwashing techniques are less effective and individuals have the knowledge to make educated purchasing decisions.

## 2.3 Company Incentives to Mitigate Greenwashing

Furthermore, while greenwashing is socially irresponsible and harmful on its own, businesses may also have an incentive to avoid greenwashing techniques because of how it impacts consumer trust. Typically, consumer satisfaction increases with corporate social responsibility. A study from the *Journal of Business Ethics* argues that the reverse is true as well.

Perceived greenwashing is likely to hurt customer satisfaction as it signals corporate hypocrisy and disappoints customers when businesses do not deliver on their promises (Ioannis, 2022).

When customers perceive a company to be greenwashing, it negatively affects their evaluation of and attitude towards a firm. Thus, companies are likely to benefit from eliminating greenwashing from their marketing strategy.

## 2.4 Social Media in Advancing Collective Action

Social media use among internet users has steadily risen since its inception. Roughly 4.62 billion people use social media worldwide, representing 94% of internet users (Pabian & Pabian, 2023). Further, the younger generations consistently demonstrate higher use compared to other age groups. As social media use continues to expand, so does information sharing. Researchers argue that as social media use increases, so should the spread of knowledge on sustainability (Pabian & Pabian, 2023). For instance, by sharing informational resources, sustainable product alternatives, or zero waste habits, social media can be used as a tool to increase understanding of environmental risks, social impacts, and options to live more sustainably as an individual. This is particularly relevant for young adults looking to make more sustainable choices as consumers.

Similarly, knowledge sharing can be employed as a tool of collective climate action. Collective action is defined as people working together to achieve a common goal. There is a demonstrated need for collective action to address the impacts of climate change. Just as human society has collectively contributed to the changing climate, society must also work together to mitigate and adapt to its impacts (Ardoin & Bowers, 2025). In this context, collective action can be seen as individual consumers collectively working together to live more sustainably by limiting their personal environmental impact and choosing to support companies who act with

the environment in mind. Historically, social media has played a critical role in advancing collective action in consumer behavior in the form of boycotts. In times of conflict and unrest, individuals may use their power as consumers to express their beliefs and exert power over corporate policies (Misiewicz et al., 2024). Social media can heighten this collective behavior as individuals share their opinions, stories, and actions.

In the case of greenwashing, social media may be used as a tool for influencers and common users alike to share actions they are taking to live and consume more sustainably. Since greenwashing poses a threat to this positive collective action and creates opportunity for the spread of misinformation, it is crucial that greenwashing is mitigated.

## 2.5 Gaps in Literature

Upon analyzing the available literature, it is clear there is room for further research on the intersection between exposure to sustainability-related advertising on social media and consumer knowledge of greenwashing. More specifically, it is necessary to understand if young consumers can recognize greenwashing and what they do differently, if anything, when they recognize greenwashing. Understanding this connection will likely support the growing need for environmental education for consumers so they may better differentiate between genuine sustainability claims and greenwashing techniques. Simultaneously, increased transparency from firms is likely to build trust with young consumers who may be looking to support companies on a sustainability journey. Working in tandem, actions from consumers and companies may help mitigate greenwashing and support firms with genuine sustainability commitments as they continue to improve their operations.

### **3. Methodology**

#### **3.1 Research Design and Instrumentation**

This study utilized surveys as the primary method of data collection. Aside from demographic questions, the survey included 19 questions assessing social media use, exposure to eco-friendly marketing, knowledge of greenwashing, and attitudes towards sustainable products. The survey combined Likert-scale questions, multiple choice, multiple select, and open-ended responses to collect both qualitative and quantitative data (Appendix A).

Surveys were completed online via a Google Form. Informed consent was obtained electronically prior to participation. Upon reading the informed consent statement at the beginning of the survey, participants chose whether they agreed to be a part of the study. Those who did agree to participate were directed to the rest of the survey to complete the questions (Appendix B). The survey took approximately five minutes to complete and was open from October 13, 2025 to November 12, 2025.

#### **3.2 Participants**

For the purpose of this study and focusing on young consumers, the participants of this study were all aged 18-24. Additionally, participants were required to have social media and engage with its content on a regular basis. The sample consisted of 183 participants. For the purpose of understanding the sample, demographic information such as age, gender, educational background, and location was collected.

### 3.3 Survey Distribution Methods

The survey was distributed in a variety of ways. A promotional flyer was developed detailing the purpose of the study, requirements for participation, a QR code to access the survey, and a sentence regarding the gift card raffle associated with participating in the study (Appendix C). Flyers were hung on bulletin boards across the Colorado State University (CSU) campus in both academic and on-campus housing buildings. A few flyers were also posted in local coffee shops. Upon contacting each of the colleges within the university, the survey was shared through department newsletters, social media accounts, and other methods that aligned with each department's communication practices. Further announcements were made in the classes of the student researcher and thesis committee as well as through word of mouth with friends, family, and coworkers. Additionally, the survey was disbursed digitally through Instagram, Snapchat, and LinkedIn.

### 3.4 Data Analysis Techniques

Upon closing the survey and completing the data collection process, data were analyzed using the following techniques. Given most data collected were qualitative responses, quantitative data analysis was more limited. First, quantitative data was cleaned for clarity and ease of creating visuals. This was done in Microsoft Excel and primarily included changing the naming format and capitalization of responses so they could be accurately counted. Responses were also categorized into groups when appropriate. For instance, in the question asking about location of residence, all responses outside of Colorado were grouped by region of the United States. From here, the frequency of each response option was calculated and displayed using pie charts and bar graphs to provide a clear visual representation of the distribution of responses

across survey items. No inferential statistical tests were conducted, as the purpose of quantitative analysis was to understand social media use and describe patterns in participants' awareness of greenwashing, exposure to sustainability marketing on social media, and related behaviors.

Qualitative responses to open-ended survey questions were analyzed using thematic analysis (Sirwan et al., 2025). For simplification purposes, data for participant location and major/job title was consolidated. For location, responses were grouped by region within the United States with the exception of Colorado which was kept separate. For participant degree programs or professional titles, some degree programs were grouped into more general categories such as Humanities, Music, and Economics. As for the thematic analysis process, first responses were read through multiple times to achieve familiarization with the data. Then, inductive coding was used to identify recurring themes and patterns. With no predetermined set of codes, codes were created as they emerged from the dataset. For ease of coding, the responses of survey questions with qualitative data were placed in a Google document. From here, initial coding was done by adding a comment with its code to each response. Codes were primarily descriptive in nature, describing the broader category or idea of the response. For instance, in the question that asks participants to give examples of sustainability-focused brands or influencers, some common codes were "zero waste", "ocean health", and "conservation". After initial codes were given, line by line coding was done to gather more specific information from each response. For this application, line by line coding was most commonly used to describe examples or other specifics that a participant provided. Once the coding process was complete, themes were developed to summarize the responses to each question and the overarching experience of participants.

### 3.5 Ethical Considerations and IRB Approval

Since this study involved human participants, the study was reviewed and approved by Colorado State University's Institutional Review Board (IRB) prior to data collection (IRB Protocol #7317) (Appendix D). All procedures were conducted in accordance with ethical guidelines for human subjects research. Through the informed consent process, participants were informed that participation was fully voluntary, responses would remain confidential, and that participants could withdraw at any time with no penalty. No personally identifying information was collected and data was stored securely on systems accessible only to the research team. As for the gift card raffle, participants were informed their involvement was fully voluntary, that they would only be contacted if they were selected as a winner, and that all phone numbers would be deleted from survey data upon selecting a winner.

## 4. Survey Results

### 4.1 Sample Characteristics

To better understand the sample, it is important to describe the corresponding characteristics. All demographic information was optional and self-reported through the online survey. Beginning with age, the sample shows a fairly even distribution between each of the 7 ages with 21-year-olds having the highest response rate at 24% followed by 20-year olds at 20.8% and 22-year olds at 17.5% (Figure 4.1.1).

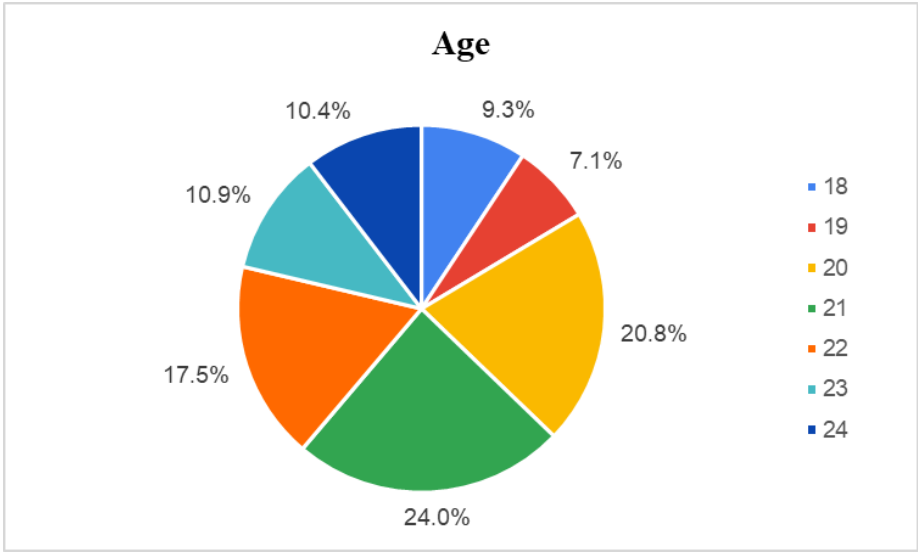


Figure 4.1.1 Pie chart depicting the distribution of ages across the sample of 183 survey participants.

As for gender, women had the highest response rate at 62.8% followed by men at 21.9% and those who did not provide their gender at 7.7% (Figure 4.1.2). While the sample is skewed with women holding the majority in the survey responses, this figure aligns with current research on online survey participation that says women are more likely to participate in voluntary surveys than men (Becker, 2022).

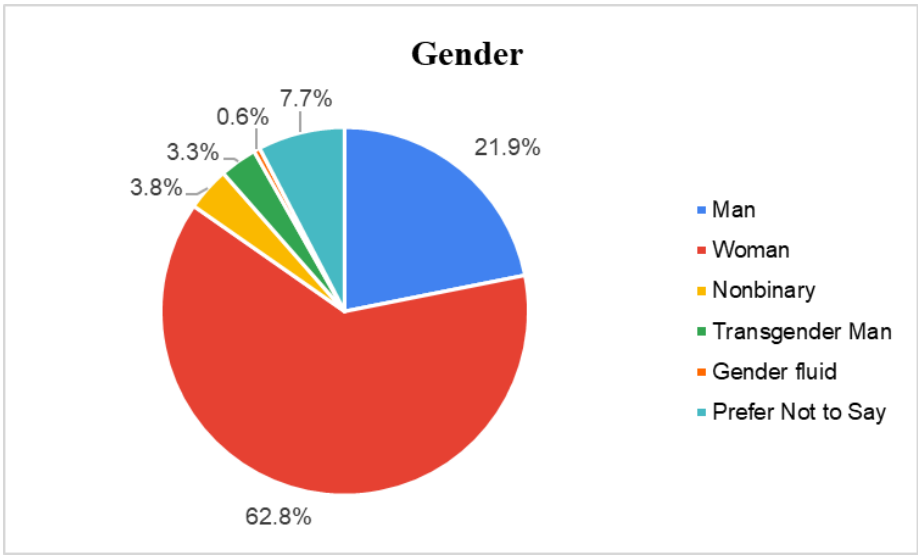
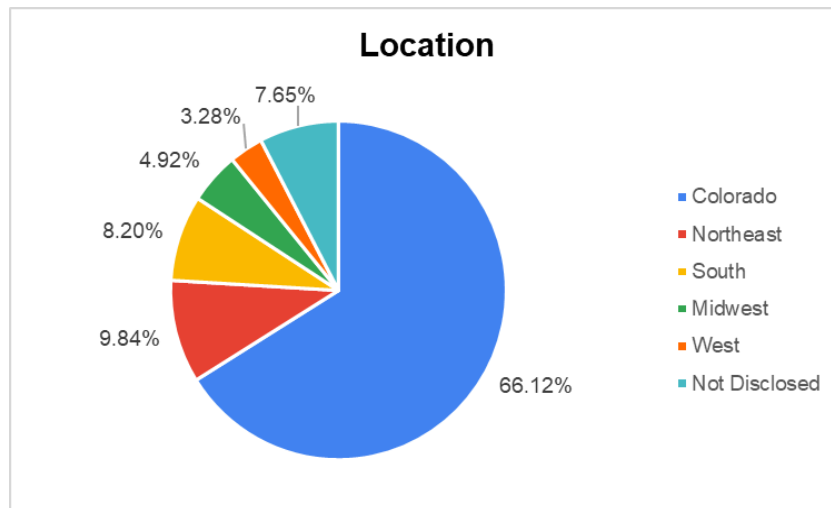


Figure 4.1.2 Figure depicting gender distribution of the 183 survey participants.

Additional demographics such as location of residence, educational background, and current degree program or professional title were also collected. Given this thesis is sponsored by CSU, located in Fort Collins, Colorado, the majority of respondents were from Colorado, quantified at 66%. The remaining 34% of respondents were from across the country, representing 21 of the 50 states. States aside from Colorado were grouped by region for ease of visualization (Figure 4.1.3).



**Figure 4.1.3** Pie chart displaying distribution for participant location of residence by region.

As for educational background, current degree-seeking students held the majority of the sample at 61.2% followed by 19.7% who had Bachelor's degrees (Figure 4.1.4). Furthermore, participants who chose not to disclose their current major or professional title represented the majority at 25%, followed by students from CSU's department of Ecosystem Science and Sustainability at 11% (Figure 4.1.5). However, the sample remains fairly representative, reaching students from 46 different degree programs and working professionals from various fields.

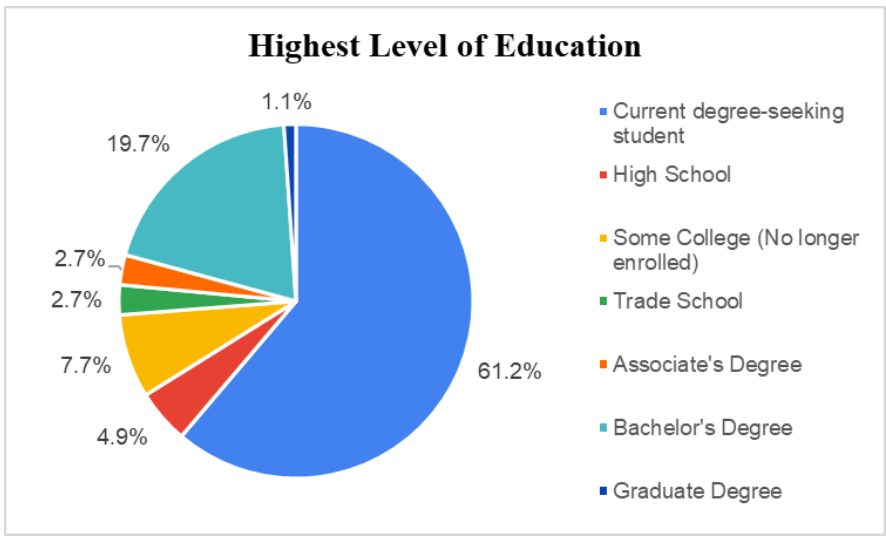


Figure 4.1.4 Pie chart depicting the education distribution across the 183 survey participants.

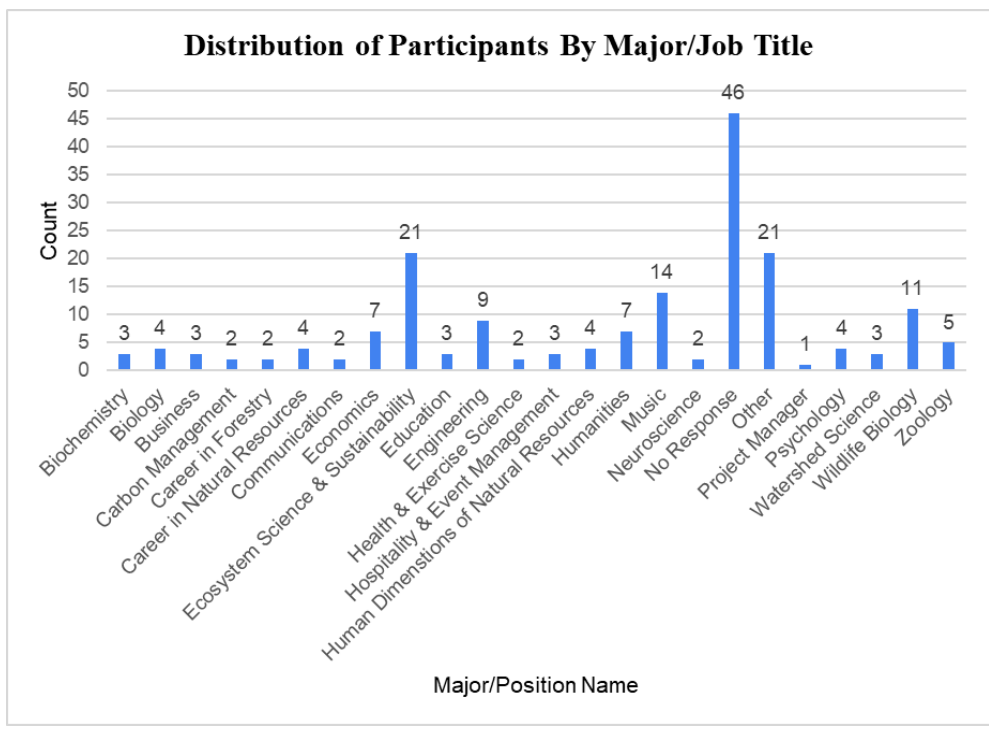
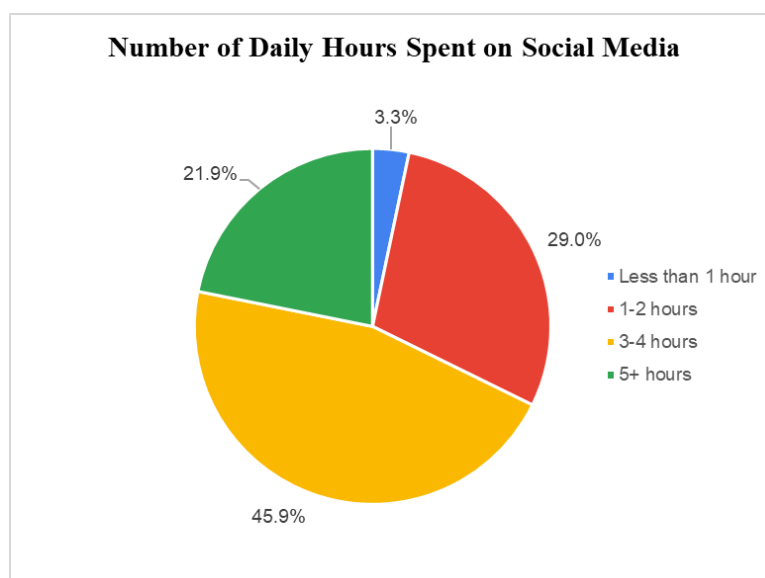


Figure 4.1.5 Bar chart depicting distribution of participants by major or job title. Majors were grouped by category for clarity. Numbers as given as a count rather than a percentage.

## 4.2 Social Media Use and Exposure to Sustainability-Related Content

To measure general social media use, participants were asked how many hours a day they typically spend on social media as well as which social media platforms they use the most. The responses from these questions indicated that just under 45% of participants use social media an average of 3-4 hours a day, with 21.9% for 5+ hours and 29% for 1-2 hours (Figure 4.2.1). This indicates a high amount of social media use across most participants as only 3.3% stated they use social media for less than 1 hour a day. Data showing high rates of daily social media use are consistent with current literature. Average daily rates as high as 8+ hours a day have been reported for young adults (Woodward et al., 2025).

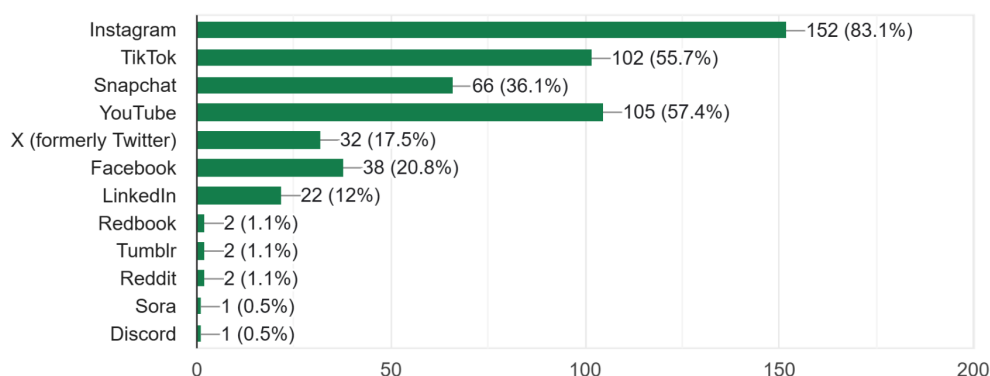


**Figure 4.2.1** Distribution of daily hours spent on social media.

Furthermore, of this social media use, Instagram is by far the most popular platform with 83.1% of participants stating that they use this app. Instagram is then followed by TikTok at 55.7% and YouTube at 57.4% (Figure 4.2.2). Although with more limited use, participants also started spending time on X, Facebook, and LinkedIn. Finally a few participants stated their use of less popular platforms such as Tumblr, Reddit, and Discord.

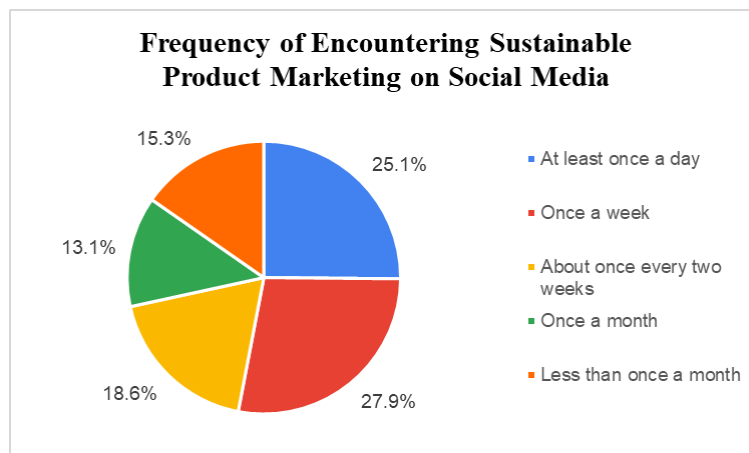
### Which social media platforms do you use the most?

183 responses



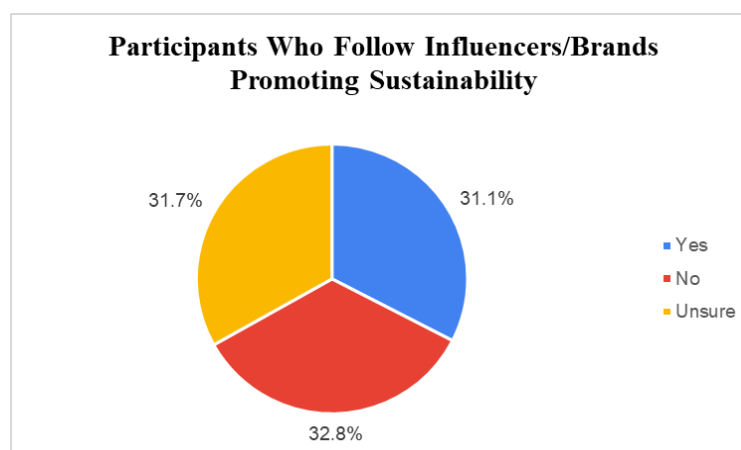
**Figure 4.2.2** Figure displaying distribution of use between the varying social media platforms. Figure displays both count and total percentage of how many participants selected each platform as one they use.

Additionally, participants were asked to estimate how often they encounter sustainable product marketing on any of the aforementioned social media platforms. The survey responses indicate a high frequency of encountering products that are marketed as sustainable or more eco-friendly than the market alternative. One-quarter of respondents said they encounter this type of messaging at least once a day with 27.9% of participants encountering this messaging once a week (Figure 4.2.3). Likewise, 18.6% of respondents see sustainable product messaging about once every two weeks. Out of all surveyed participants, only 15.3% see this type of content less than once a month, revealing a high frequency of this type of content. With a high frequency comes the potential for a high prevalence of greenwashing as well. Furthermore, social media algorithms can also play a key role in what individuals see online, often pushing content similar to what they have already engaged with. This is important to note as algorithms can impact the frequency at which individuals are presented with sustainability claims.



**Figure 4.2.3.** Figure depicts the frequency at which young adults encounter product marketing for sustainable or eco-friendly alternatives on social media.

To gauge the impact of social media influencers—individuals with large followings who create engaging content within a specific niche—participants were asked whether they follow any influencers or brands that promote sustainable actions or products in their content. Participants were given the options of “Yes”, “No”, and “Unsure” and the results were almost equally divided between the three responses. The most common response was no, one does not follow any brands or influencers that promote sustainability at 32.8%. This was followed by “Unsure” at 31.7% and finally “Yes” at 31.1% (Figure 4.2.4).



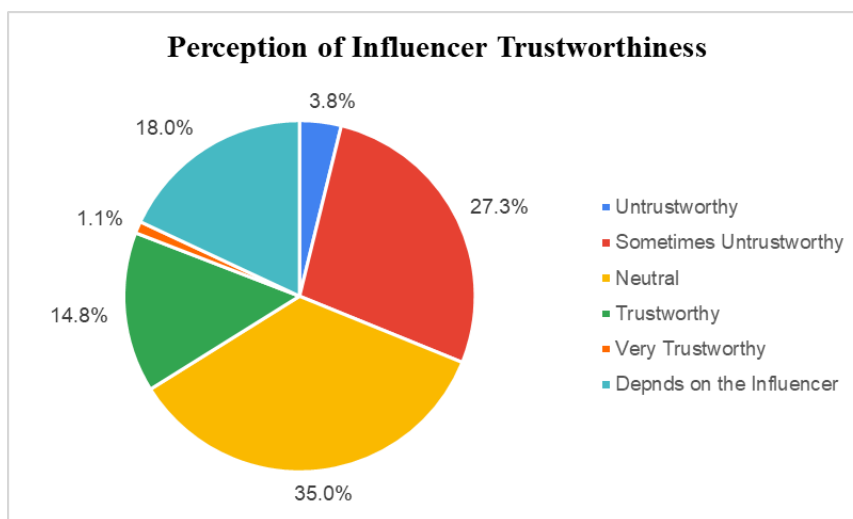
**Figure 4.2.4** Pie chart illustrating whether or not participants follow influencers or brands that promote sustainability.

Furthermore, of the participants who answered that they do follow brands or influencers promoting sustainability, it was asked that they list some of these brands and influencers. Given the broadness of the question and just how encompassing the word sustainability is, respondents provided a wide range of answers to this question. The responses were grouped into 11 different categories. Some of the most popular include outdoor gear brands such as Patagonia, North Face, and Keep Nature Wild; organizations focused on conservation such as Bird Collective and the Pacific Whale Foundation; and zero waste focused responses that center on composting and thrifting (Table 4.2.1). Responses are sorted into the following categories as shown below.

**Table 4.2.1** Table depicting each of the 11 categories for participant responses, including the number of responses per category, and some of the most common responses for each category.

Category Number	Category Name	Number of Responses	Example Responses
1	Outdoor Gear Brands	11	Patagonia, North Face, Smartwool, Keep Nature Wild
2	Ocean Health	3	4Ocean, The Ocean Cleanup
3	Zero Waste Focus	9	Compost Queen, Repeat Botique, CSU Zero Waste Team, Thrifting Influencers
4	Government Organizations	3	Colorado Parks and Wildlife (CPW), U.S. Environmental Protection Agency (EPA)
5	Beauty & Skincare	4	Attitude Living, Blue Heron Botanicals, Aer Cosmetics
6	Environmental Activists	4	Greta Thunberg, Jane Goodall, Lea Thomas
7	Sustainable Living Brands	8	Grove, Love of Earth Co, Sway the Future, Bluelands
8	Conservation	5	Bird Collective, Red Leaf Exotics, Pacific Whale Foundation, Dolphin Project
9	Plant-Based Living	5	Plantyou, lifebymikeg, Spicy Moustache
10	Education	6	Hank Green, Climate Town
11	Influencers Promoting Sustainable Living	12	Alyssa Barber, Lauren Bash, Sam Bentley, Krystalynn Gier

Additionally, individuals were asked to assess the trustworthiness of social media influencers who promote sustainable and eco-friendly products on social media. Participants answered using a likert scale from “Untrustworthy” to “Very Trustworthy”. In general, responses were mixed with the greatest percentage responding “Neutral” at 35%. In addition, 27.5% responded “Sometimes Untrustworthy” and 18% responded “Depends on the Influencer” (Figure 4.2.5).



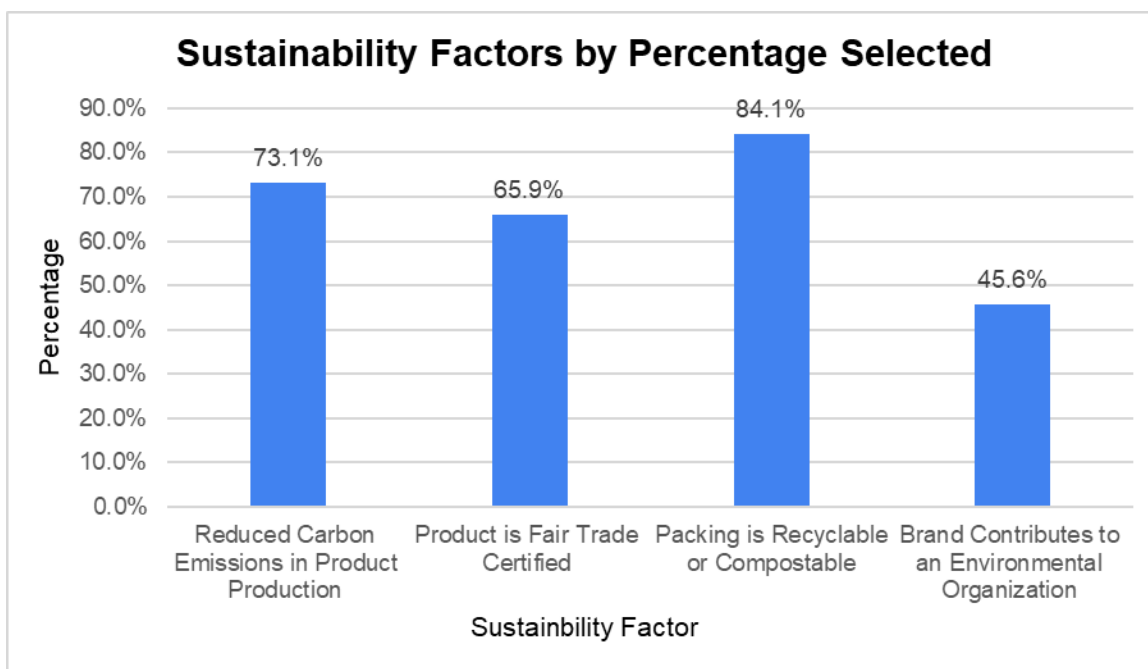
**Figure 4.2.5** Pie chart of participant assessment of influencer trustworthiness on a likert scale from “Untrustworthy” to “Very Trustworthy”.

Broadly speaking, participants show uncertainty when assessing the trustworthiness of influencer claims. However, there is a slight lean towards the perception that influencers are untrustworthy. Participants find it difficult to understand the true intentions behind influencer messaging, especially considering the financial gain influencers receive from promoting products and working with brands.

### 4.3 Knowledge of Sustainability Claims and Greenwashing Awareness

The goal of the following survey questions was to assess participant understanding of sustainability and to learn more about what it means to them in this context. Participants were

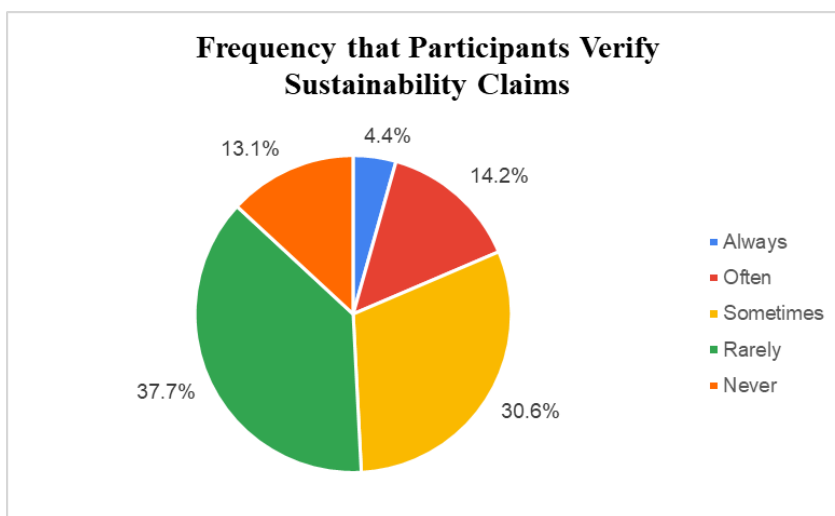
asked what they expect claims of a product being sustainable or eco-friendly to mean. Given the multiple select format, “Packing is recyclable or compostable” was listed as the most selected response with 83.1% of respondents choosing this answer (Figure 4.3.1). Second, 73.5% of respondents expect this to mean there are reduced carbon emissions associated with a product. Third, 64.5% of participants expect this to mean a product is Fair Trade certified, and 44% expect this to mean a firm makes financial contributions to an environmental organization (Figure 4.3.1). Aside from the provided selections, a few participants gave additional information through the “Other” selection. Most notably, participants expect a brand to use energy and water responsibly, minimize known persistent pollutants such as PFAS, dispose of waste properly, limit overproduction, and invest generated wealth into local communities if their labor is outsourced.



**Figure 4.3.1** Bar chart displaying the percentage of survey participants that selected each factor as an indication of sustainability for a product or brand. .

Additionally, participants were asked if they take any steps to verify sustainability claims being made. Based on the survey data, young adults are unlikely to verify the sustainability

claims that they see on social media. 37.7% of respondents stated that they rarely verify sustainability claims and 30.6% of participants sometimes verify claims (Figure 4.3.2). Of the 183 participants only 4.4% always verify the claims they see on social media.



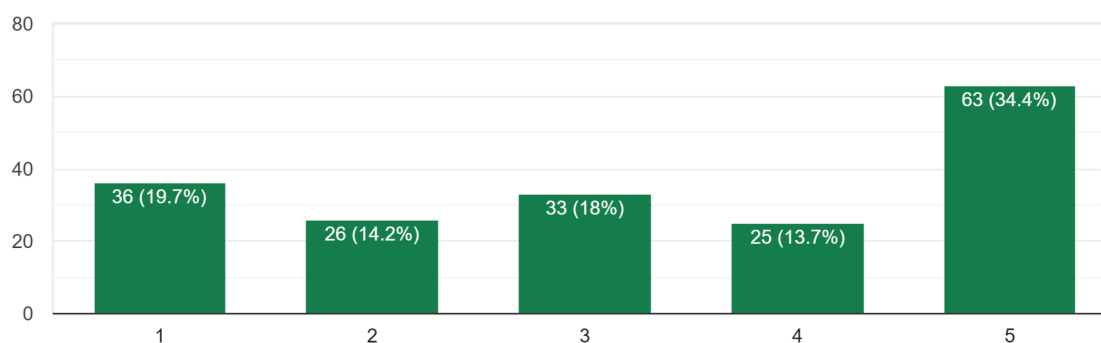
**Figure 4.3.2** Pie chart displaying frequency that participants verify sustainability claims made on social media using a likert scale from “Always” to “Never”.

Of the respondents who do spend time verifying the claims they see online, the most common method discussed was searching the company and browsing its website. On a firm’s website, respondents look for company values and mission statements, certifications, descriptive and targeted sustainability goals, and sourcing information. Furthermore, respondents seek information from peers who may be more educated on the subject, available information from the U.S. Environmental Protection Agency (EPA), or search the product on the Sustainable Product Database (SPOT). Another technique commonly discussed was to see who else is following or supporting a brand. For instance if a trusted influencer, organization, or nonprofit also follows and supports a brand, the participant stated they would be more inclined to believe the sustainability claims being made.

Continuing on, participants were provided a definition of greenwashing before questions that ask specifically about greenwashing. This was done to maintain clarity and collect informed

responses. After reading the provided definition, participants were asked to rate their familiarity with greenwashing prior to taking this survey on a scale from 1-5. On this scale, 1 represented not at all familiar and 5 represented very familiar or enough that they could explain the concept to someone. Overall the responses to this question were spread across the five levels of understanding with the largest portion (34.4%) of respondents rating their familiarity with greenwashing at a 5 (Figure 4.3.3). This is likely due to the high percentage of participants being enrolled in a natural resources-related major or career. The remaining respondents were split across the levels of familiarity.

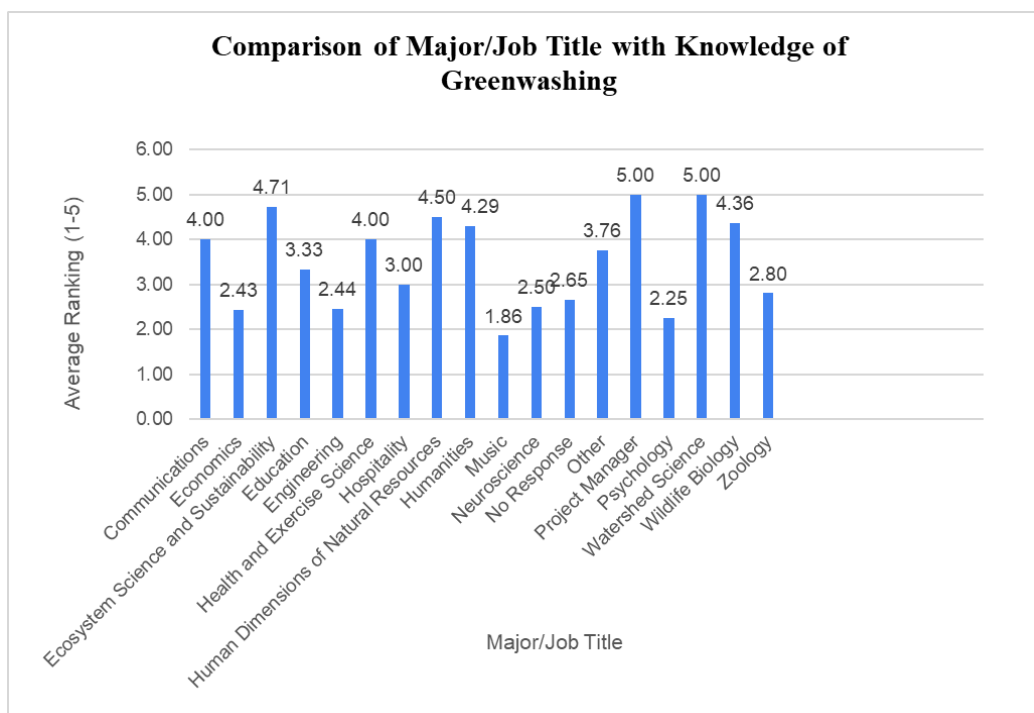
On a scale of 1-5, how familiar were you with the term greenwashing prior to taking this survey?  
183 responses



**Figure 4.3.3** Bar graph depicting participant familiarity with greenwashing prior to taking the survey.

To further analyze the relationship between current major or job title and familiarity with greenwashing, a comparison was done between the two metrics. For each category of major or job title, the average familiarity (scale of 1-5) was calculated. Individuals studying Watershed Science, Ecosystem Science, Wildlife Biology, and Human Dimensions of Natural Resources have some of the highest averages and are consistently a 4 or above (Figure 4.4.4). Alternatively,

disciplines that are traditionally less sustainability-focused have lower averages of familiarity such as Music at 1.86, Psychology at 2.25, and Economics at 2.43 (Figure 4.3.4).



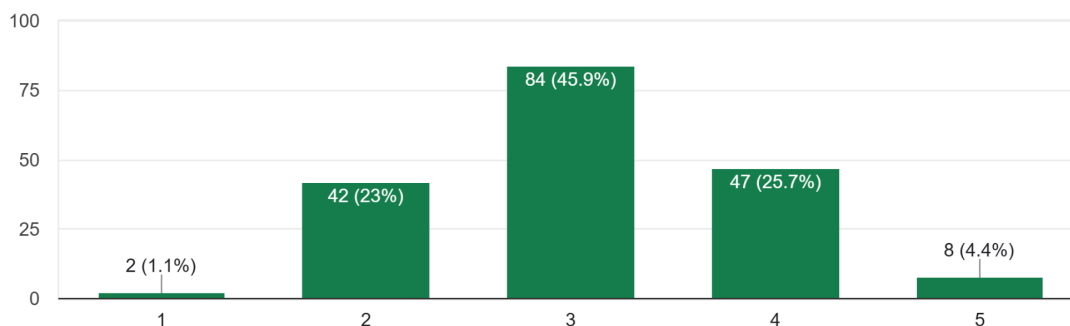
**Figure 4.3.4** Bar chart displaying the comparison between major/ job title and familiarity of greenwashing prior to taking the survey.

Similarly, to better understand how easily young consumers are able to identify greenwashing techniques, participants were asked to rank how difficult they find it to determine if a company is using greenwashing techniques in their marketing strategy. Though this might depend on the company and how forthcoming they are with information, this question was asked to gauge the general ease at which individuals can identify factors of greenwashing. Using a similar scale, participants provided their rankings on a scale of 1 to 5 with 1 being “Very Easy” and 5 being “Very Difficult”. In general, the data show participants being centered in the middle in terms of their ability to recognize greenwashing. The data for this question took the shape of a

standard bell curve as 45.9% of participants rated their ability at a 3, 23% rated their ability at a 2, and 25.7% rated their ability at a 4 (Figure 4.3.5).

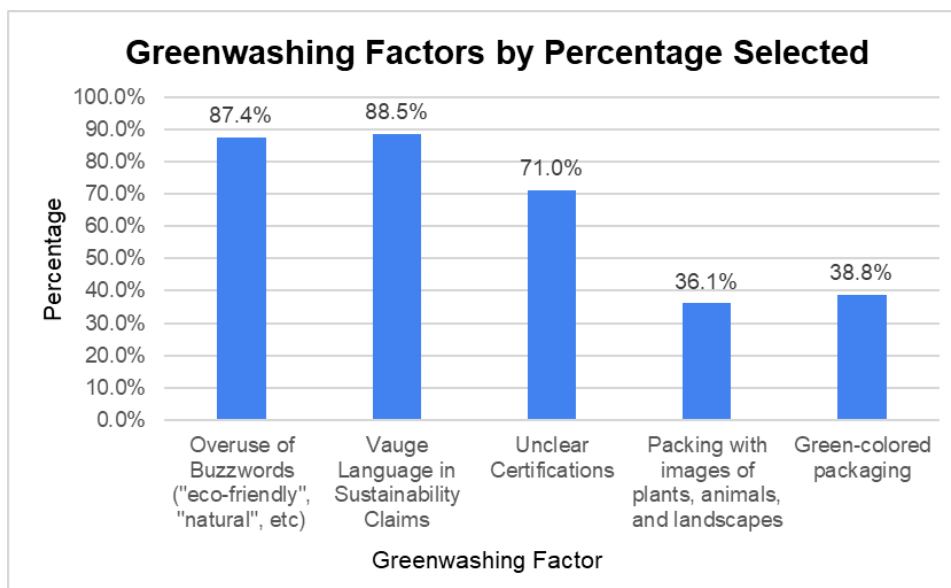
On a scale of 1-5, how easy or difficult do you find it to determine if a company is using greenwashing techniques in their marketing strategy?

183 responses



**Figure 4.3.5** Figure displaying the distribution of ranking for participants' ability to determine if a company is using greenwashing techniques.

When asked what factors make participants suspect a brand is greenwashing, a few main themes were highlighted. Using a multiple select format, participants were asked to select which factors make them suspect greenwashing and had the option to state additional factors outside of what was provided. The most selected answer was “Vague Language” with 88% of participants selecting it, and “Overuse of Buzzwords” was the second most selected with 72.5% of participants selecting it (Figure 4.3.6). Closely following these factors, “Unclear Certifications” was the next most popular with 72.5% of participants selecting it (Figure 4.3.6). Other lesser selected but still important factors were packaging with plants and animals, and packaging with the color green.



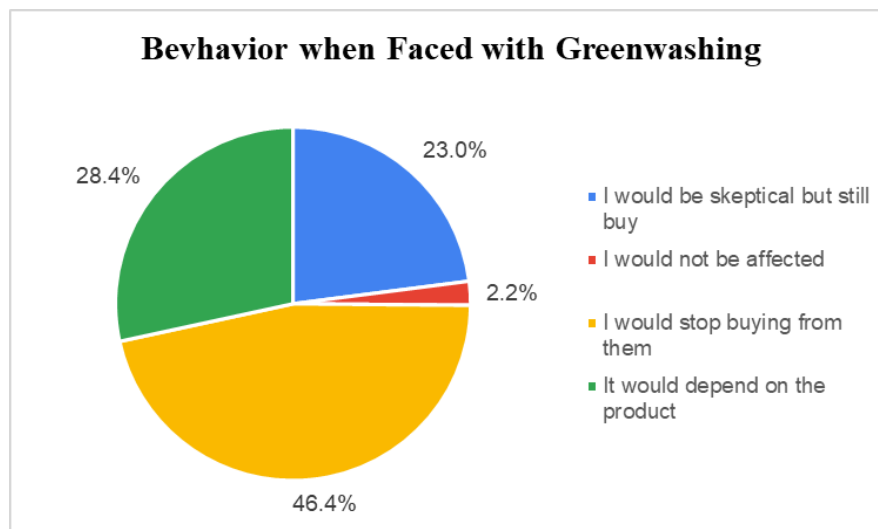
**Figure 4.3.6** Pie chart depicting the percentage of participants that selected each factor as an indication of greenwashing.

In addition to these provided factors, participants voiced other factors that made them suspect greenwashing. For one, participants suspect greenwashing when sustainability statements are given by companies in traditionally carbon intensive industries such as beef, agriculture, and energy. There was also skepticism when brands are affiliated with larger retailers such as Amazon, Target, or Walmart, revealing a bias toward larger retailers. Finally, respondents voiced skepticism when brands promote one specific product that is “eco-friendly” when the rest of their offerings are not. Participants felt this to be disingenuous and a way to target sustainability-conscious consumers rather than improve the company’s operations at large.

#### 4.4 Consumer Response to Greenwashing

Respondents were asked a series of questions to gauge their response to greenwashing and associated actions they may take. First, individuals were asked how they would respond if they suspected a company to be greenwashing. Overwhelmingly, participants responded that they

would stop buying the product at 46.4%. Similarly, 28.4% said it would depend on the product and 23% said they would be skeptical but still buy. Out of all 183 respondents, only 2.2% said they would not be affected (Figure 4.4.1).

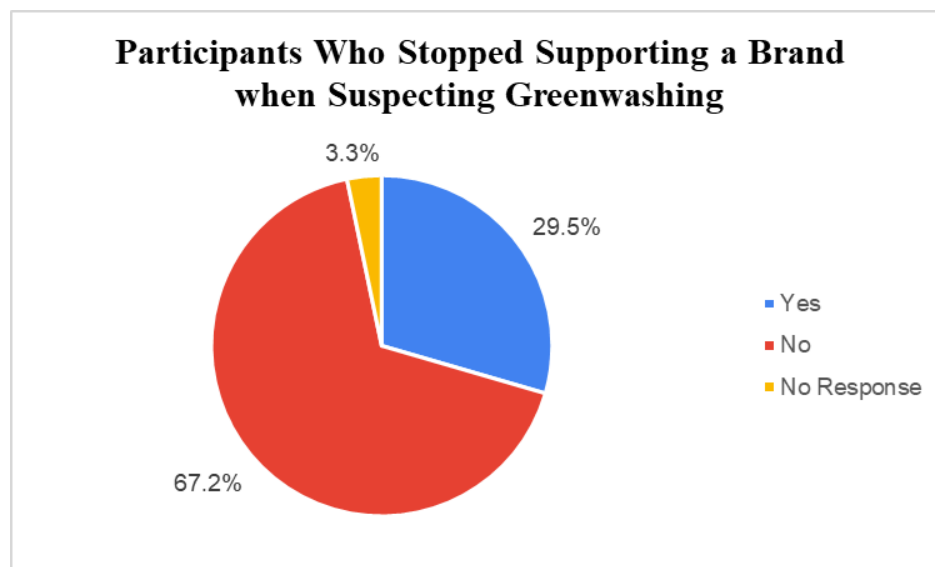


**Figure 4.4.1** Pie chart depicting how consumers would react when a product turns out to be misleading in its sustainability claims.

When asked to elaborate on their answer to “It would depend on the product” a few main themes emerged. The first of these themes was whether or not the item was a necessity and had limited alternatives. Similarly, affordability was a main consideration for most consumers, especially since the target audience is young and most participants were university students. While participants may look for an alternative, if it was not affordable or did not fulfill the same needs as the original product, individuals would choose to purchase the original product, despite its misleading sustainability claims. Furthermore, if individuals had a strong connection or history with a product, they would be less likely to switch. Whether for cultural or personal reasons, if participants had a strong attachment to a product, they would be less likely to find an alternative. Similarly, the type of product was also discussed as a deciding factor. If the item was part of an already oversaturated market like that of clothing or nonessential goods, participants would be more likely to avoid buying the misleading item. Finally, for some participants, additional

context was needed in order to determine the action they would take. For instance, some participants stated they would want to know the extent of the greenwashing and if it was a one-time instance or a long term pattern for a company.

Yet, when asked whether they had previously stopped supporting a brand when suspecting greenwashing, a majority of participants (67.2%) said that they had not (Figure 4.4.2).



**Figure 4.4.2** Pie chart depicting whether or not participants had stopped supporting a brand when they suspected greenwashing.

For those who responded that they had stopped supporting a brand, a follow-up question was asked for participants to give more information. One of the most referenced industries was clothing, particularly fast fashion. Participants had stopped supporting brands such as Temu, Shein, and H&M. While these companies do not typically mention sustainability efforts and have not invested in greenwashing, respondents reported having stopped purchasing from these companies to limit their own overconsumption. Also, specific beauty brands such as Native and Burt's Bees were mentioned for having false claims. Cleaning products were another highly reported category. Participants were disappointed by cleaning products that claim to be “natural” or better for the environment. Furthermore, there was some uncertainty presented about specific

companies such as REI and Trader Joe's. While these companies present an image of being environmentally conscious, respondents question their values and are disappointed in their lack of transparency. Finally, participants noted a decision to change what they were purchasing with a goal to reduce waste. For instance, while not a direct effect of greenwashing, individuals noted having switched to alternatives that are less wasteful such as using a standard coffee pot over continuing to buy coffee pods for a Keurig machine. These actions reveal a continued desire from young consumers to limit their environmental impact when possible.

#### 4.5 Building Trust with Young Consumers

To gain a deeper understanding of what could build consumer confidence in a firm's social media marketing strategies, participants were asked what would make them more confident that a brand is being honest about its sustainability efforts. One of the underlying themes from participants was a need for companies to be showing any credible certifications they have. Consumers want to see proof that companies are doing what they say they are. With this, many participants described a desire to see the manufacturing process of how a product is made in order to be sure it is being produced ethically. Showing this process would prove to consumers that the company is not trying to hide their process from the public. This is echoed in existing literature as well. When a company is transparent about its manufacturing process and labor process, consumers are more likely to buy from said company and spread positive word of mouth (Kang & Hustvedt, 2013). Similarly, consumers would be more confident in a company's sustainability claims if they were to share their raw data on carbon emissions from their upstream and downstream process. Consumers want full transparency in this regard so they can make their own assessment as to whether or not a company is trying to reduce their carbon emissions. Along

with this, participants voiced a need for companies to be honest about their ingredient sourcing and supply chain. If a company says a product is more sustainable but is sourcing their materials or labor unethically, then it can not be marketed as such. Finally, consumers would appreciate seeing measurable and detailed goals from a company. Whether a product or brand is operating sustainably, by providing actionable goals that the company can work towards achieving, consumers would be more confident that a company is being honest about its sustainability journey. Ultimately, transparency and communication is key in building trust among young consumers.

Moreover, participants were asked what they think brands can do to build trust with young consumers regarding their sustainability efforts. The survey responses for these questions can be summarized into a few main themes. Similar to that of the previous question, the first of these themes is providing transparency regarding current progress towards sustainability initiatives and making information easily accessible to the public. Whether in the form of frequent sustainability reports or information presented on a firm's website, having resources available for consumers builds trust that a firm is doing what it says it will. Furthermore, participants voiced the desire to have more information about a company's supply chain. Providing individuals with a supply chain map, for instance, would help communicate where a firm is sourcing its materials in a more digestible format. In addition, participants hope to see more firms partnering with nonprofits and universities for research. Investing in these partnerships proves to consumers that firms are looking to innovate and improve their operations. This is particularly relevant for goals such as avoiding excessive plastic use, or decarbonizing manufacturing processes.

Also, participants would prefer that companies avoid fear mongering in their marketing strategy. Rather than scare consumers about climate change in order to promote a specific product, consumers would prefer that firms take action to make their business more sustainable and remain honest about the function of a product being advertised. Finally, participants wish to see a stronger line of communication develop between firms and consumers. This could be in the form of outreach events or specific reports describing where a company is at in its sustainability journey. Overwhelmingly, participants stated that they would rather a firm show current progress they have made towards making their operations more sustainable and remain honest with the challenges they face, than overstate their progress. Ultimately, even the largest companies are driven by humans, and young adults hope to see more of this human connection come out through improved communication.

In the final survey question, participants were given the opportunity to share anything else they thought was relevant to the topic. While most responses were a variation of the common answers to the previous questions, a final theme emerged. This theme was the concern for the lack of common knowledge about sustainability and the presence of false information. Some participants expressed feeling discouraged to act sustainably or having friends who felt discouraged due to the misinformation being spread. Additional environmental education is necessary to build confidence in young consumers and activate their sense of efficacy.

## **5. Discussion**

### **5.1 Summary of Findings**

The results illustrate that young consumers spend a high number of daily hours on social media. Consequently, they are also faced with greenwashing at a high rate. This result proves this

study is relevant and meaningful in the lives of everyday consumers. With young adults facing greenwashing on a frequent basis, it is increasingly necessary that they are able to recognize greenwashing and avoid supporting firms who employ it as a marketing strategy. Based on the data, most young adults have an unfavorable view of greenwashing and would choose to support a more sustainable option if it is available, affordable, and an adequate alternative. Despite this being true, 67% of participants stated they have not stopped supporting a firm after suspecting greenwashing.

## 5.2 Implications for Consumers and Firms

The dissonance between consumer opinion and consumer action is likely due to the current difficulty in being able to differentiate between greenwashing and legitimate sustainability claims. This suggests a need for further education from a consumer standpoint. By further educating consumers on the negative impacts of greenwashing, some common factors of greenwashing, and strategies to verify sustainability claims, consumers would be more equipped to differentiate between claims and make their own educated purchasing decisions. Likewise, giving young consumers resources on positive information to look for, such as credible certifications, could prove beneficial. Some examples include B Corp, Fair Trade, and Forest Stewardship Council certifications which set strict standards with ongoing compliance metrics.

The need for additional environmental education is further supported by the relationship between major/ job title and familiarity with greenwashing, as demonstrated through the survey results. Since participants in a natural resources-related major or career are typically more exposed to sustainability and environmental concerns, the trend of increased familiarity with greenwashing for these individuals is intuitive. This reveals the impact of environmental

education in increasing consumer awareness of greenwashing. By formulating and sharing even generalized education on sustainability and the negative consequences of greenwashing, it is likely more consumers will seek out alternative products and brands when possible. This is echoed in existing literature which found that environmental education is critical in encouraging young adults to develop responsible consumption habits that center on an awareness of sustainability and limiting impact (Velasco-Martinez et al., 2020). Furthermore, implementing environmental education early, beginning in elementary school or sooner, is key in advancing knowledge for individuals as they age and become consumers in the market. Introducing students to environmental education at a young age encourages attitudes and behaviors that are consistent with limiting waste and the depletion of natural resources (Velasco-Martinez et al., 2020). Ultimately, consumers need to improve environmental educational programs and remain open to change, switching to new products or brands as they better align with broader sustainability goals.

Additionally, the results reveal a strong need for increased transparency within marketing initiatives. Throughout the various survey questions, participants repeatedly voiced a distaste for deception within marketing, especially related to sustainability. Participants do not want to be deceived or lied to. Instead, participants would prefer to make educated purchasing decisions that align with their own goals, resources, and values. Transparency has been demanded on all fronts, from upstream sourcing and manufacturing, to downstream emissions, and end of life waste. Being more honest and communicative with consumers is likely to build trust and boost sales as supported by the corporate responsibility framework.

A current example of honest and authentic messaging about a firm's sustainability initiatives comes from a recent report published by Patagonia. Entitled "Work in Progress

Report”, Patagonia’s 2025 impact report states exactly what it is. The entire report is written in a digestible, visually-appealing format that is approachable to the average consumer. Even from the first few pages the company is transparent about their struggles to meet their stated sustainability goals, informing readers of their 2% increase in greenhouse gas emissions over the last fiscal year and their ongoing struggle to incorporate recycled materials into their fabrics. That said, the report is also mixed with real progress the company is making such as eliminating 100% of its forever chemicals and having 95% of its products made in Fair Trade Certified factories (“Work in Progress”, 2025). The true shift in sustainability reporting that Patagonia displays is its bold statement, “Nothing we do is sustainable”. Founder Yvon Chouinard recognizes that no business can give back as much as it takes and that the best a business can do is be accountable for its impact and do what it can to reduce and repair that damage (“Work in Progress”, 2025). Ultimately, this is what young consumers have asked for.

This report by Patagonia may serve as a model for future firms working to build trust with its consumers, especially young adults. Given the immense effort it takes most businesses to source their materials responsibly, decarbonize their operation, and limit post-consumer waste, it is understandable that progress takes time to achieve. Essentially, consumers want to see that firms are aware of their impact and are making a genuine effort to innovate and reduce it where they can.

### 5.3 Limitations of Study

Despite its findings, it is important to consider the following limitations of this study. For one, the survey data is skewed based on location with a high percentage of respondents being from Colorado, specifically Fort Collins. Despite best efforts to achieve a diverse sample, time

restrictions and limited resources constrained the available sample pool. That being said, the results are still relevant given a strong distribution among age and major/career. Collecting responses from individuals with a diverse set of careers and areas of study was crucial in highlighting differences among sustainability knowledge and identifying gaps for future education. Similarly, another limitation exists in the relatively short time-period of data collection. With more time to collect data, it is possible more responses could have been received from other geographic locations.

An additional limitation exists in the context given to participants upon taking the online survey. When analyzing survey responses, it became evident some participants needed additional information on the working definition of sustainability and what it meant in this context. Because sustainability is an overarching umbrella term, frequently using it in the survey questions may have caused confusion for some respondents. Providing a definition for sustainability in this context could have generated better informed responses for some participants.

Moreover, it would have been advantageous to have a section on the survey with examples or snapshots of marketing that includes sustainability claims. From here participants would be asked to select if this was greenwashing or a genuine sustainability claim. While participants may be able to rate their perceived ability to identify greenwashing, it would have been useful to test this in practice.

#### 5.4 Recommendations for Future Research

Given the opportunity to replicate this study, it would be advantageous to consider the following modifications. For one, reaching more participants and expanding the sample would be ideal. While a sample of 183 participants provides well founded results, increasing the number of

responses is likely to expand the narrative and offer a more diverse perspective than achieved through this study. As aforementioned, it would also be advantageous to provide participants with a contextual definition of sustainability to increase clarity for respondents. Finally, reshaping the survey and/or adding the following questions would offer greater insight into where young consumers need more support when facing greenwashing:

1. What barriers are currently preventing you from doing more research into the validity of sustainability claims?
2. What else do you wish you knew about greenwashing to make better informed purchasing decisions?

The above questions would provide greater insight into the knowledge gaps of young consumers regarding sustainability initiatives and potential greenwashing. Understanding what barriers young adults face can create more informed educational programs to overcome these barriers and build confidence in young consumers.

## **6. Conclusion**

As the impacts of climate change increase in severity, consumers are demanding firms take greater responsibility for their environmental impacts and make their operations more sustainable. Unfortunately, some brands have used this demand for sustainable products as an opportunity to mislead consumers and present a more sustainable corporate image than is true. This practice is exacerbated through current online marketing strategies via social media and influencer brand deals. Also known as greenwashing, survey results reveal that young consumers do not find this practice acceptable. Through survey responses, a strong dislike for deceptive marketing practices has been demonstrated. While most respondents voiced they would stop

supporting a company if greenwashing was suspected, only 30% of respondents have done so in practice. This reveals an attitude-behavior gap that young consumers have between their desire to avoid greenwashing and their practiced behavior. This attitude-behavior gap is likely a result of rationalization strategies or another influencing factor such as a lack of greenwashing awareness (Wintschnig, 2021). This dissonance reveals a need for further action to be taken from both consumers and companies in the face of greenwashing, including improved environmental education and resources for recognizing greenwashing. Ultimately, the challenge of greenwashing is a push and pull, requiring increased consumer knowledge and improved corporate transparency.

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## Appendices

### Appendix A: Survey Questions

#### Section 1: Qualifying Considerations

1. Please select an option below to indicate you read the information above and you wish to take the survey:
  - a. Answer option 1: I agree to be in this study
  - b. Answer option 2: I do not agree to be in this study
  
2. Age
  - a. Answer option: Dropdown of ages from 18-24

#### Section 2: Demographics

3. Gender
  - a. Options: Man, Woman, Transgender Man, Transgender Woman, Nonbinary, Prefer Not to Say, Other
  
4. Location (City and State)
  - a. Answer option: Open response
  
5. Educational background
  - a. Options: High school, Some College, Trade School, Associate's Degree, Bachelor's Degree, Graduate Degree
  
6. Current professional position or degree in school
  - a. Answer option: Open response

#### Section 3: Social Media Use and Greenwashing Awareness

7. On average, how many hours per day do you spend on social media?
  - a. Answer options: Less than 1 hour, 1-2 hours, 3-4 hours, 5+ hours
  
8. Which social media platforms do you use the most?
  - a. Answer options (multiple select): Instagram, TikTok, Facebook, YouTube, Snapchat, Other
  
9. How often do you encounter posts about sustainable or eco-friendly products on your social media feeds?

- a. Answer options: Less than once a month, Once a month, About once every 2 weeks, Once a week, At least once a day
10. Do you follow any influencers or brands that promote sustainability or sustainable products on social media?
- a. Answer options: Yes, No, I'm not sure
11. If you answered "Yes" to the previous question, please list a few influencers or brands you follow.
- a. Answer option: Open response
12. How trustworthy do you find social media influencers who promote eco-friendly products?
- a. Answer options: Untrustworthy, Somewhat trustworthy, Neutral, Trustworthy, Very trustworthy, Depends on the Influencer (with blank to explain)
13. When a product claims to be eco-friendly or sustainable, what do you expect it to mean?
- a. Answer options (multiple select): Reduced carbon footprint, Product is Fair Trade Certified, Packaging is recyclable or compostable, Brand makes contributions towards and environmental organization, I don't know, Other
14. When a product claims to be sustainable, do you take any steps to verify the claims being made?
- a. Answer options: Never, Rarely, Sometimes, Often, Always
15. If you answered sometimes, often, or always to the last question, please describe any action you take to verify sustainability claims.
- a. Answer option: Open response
16. On a scale of 1-5, how familiar were you with the term greenwashing prior to taking this survey?
- a. Answer options: Select a number 1-5 (1= "Not at all familiar, I've never heard the term", 5 = "Very familiar, I could explain the concept to someone")
17. On a scale of 1 to 5, how easy or difficult do you find it to determine if a company is using greenwashing techniques in their marketing strategy?
- a. Answer options: Select a number 1-5 (1 = Very easy, 5 = Very difficult)

18. What factors make you suspect a brand might be greenwashing?
  - a. Answer options (multiple select): Vague language, Lack of evidence, Overuse of buzzwords, Unclear certifications, Images of natural landscapes or animals on packaging, Packaging with the color green, I don't know, Other)
  
19. If a product you were interested in turned out to be misleading in its sustainability claims, how would it affect your perception of the brand?
  - a. Answer Options: I would stop buying from them, I would be skeptical but still buy, I would not be affected, Depends on the product
  
20. If you answered "It would depend on the product" please elaborate here
  - a. Answer option: Open response
  
21. Have you ever stopped following or supporting a brand because you suspected they were engaging in greenwashing?
  - a. Answer options: Yes, No
  
22. If you answered "Yes" to the previous question, please explain.
  - a. Answer option: Open response
  
23. What would make you more confident that a brand is being honest about its sustainability efforts on social media?
  - a. Answer option: Open response
  
24. What do you think brands should do to build trust with young consumers around their sustainability efforts?
  - a. Answer option: Open response
  
25. Is there anything else you would like to share regarding this topic?
  - a. Answer option: Open response

## **Appendix B: Informed Consent For Survey**

The following is the informed consent statement provided at the top of the survey. Prior to completing any survey questions, participants were required to read the consent statement and select whether or not they agreed to be in the study. If participants selected “I do not agree to be in this study” they were redirected to the end of the survey and could close out of the form.

### **Informed Consent Statement:**

Welcome! This survey is part of an Honors thesis at Colorado State University (CSU), exploring how young adults interpret and respond to greenwashing on social media. **It is recommended you read the following information to familiarize yourself with this study before agreeing to complete the survey.**

### **Purpose, Procedure, and Duration**

We are researchers from CSU, Department of Ecosystem Science and Sustainability, inviting you to participate in a survey as part of an Honors thesis (IRB protocol 7317). We want to learn more about how young adults perceive and react to greenwashing through social media.

If you agree to participate in our study, you will be asked to answer a combination of multiple choice and open response questions relating to your social media use, content you engage with, and actions that you take. The survey will take about 5 minutes to complete.

### **Eligibility**

In order to participate, you must be:

- Age 18-24
- Have social media and engage with its content

### **Risks**

Some of our questions may make you feel uncomfortable, but you can skip any question you don't want to answer. You may also stop the survey at any time.

### **Benefits**

You may not benefit personally from being in this study, but your answers could help us understand more about how young adults perceive greenwashing, to advocate for increased transparency in eco-friendly marketing and improve education on this topic.

**Compensation**

You may choose to enter the gift card drawing for a \$20 Dutch Bros gift card for participating in our study. You have an approximate 1 in 200 chance of winning. If choosing to participate in the raffle, you must provide your phone number in the corresponding question at the end of the survey. You will only be contacted if you are the winner and all phone numbers will be permanently deleted from survey data upon selecting a winner.

**Alternative Opportunities**

There are no alternatives at this time.

**Privacy and Future Use**

Your responses to the research survey are anonymous. That means we won't know which responses are yours. We don't collect names, internet addresses, or any other identifiable information, unless you provide your phone number to participate in the gift card raffle.

We will not use your responses in future research or share them with other researchers.

**Complaints or Concerns**

If you have questions about the study, please contact Kendall Landwehr at [kendall.landwehr@colostate.edu](mailto:kendall.landwehr@colostate.edu).

If you have any questions about your rights as a volunteer in this research, contact the CSU IRB at [CSU\\_IRB@colostate.edu](mailto:CSU_IRB@colostate.edu)

Thank you for taking the time to consider our study. You do not have to participate in our study, but we hope you will. To ensure your responses will be included in our study, please complete the survey by November 12, 2025.

## Appendix C: Promotional Flyer



**Green or Greenwashed?**

We want to know what *you* think.

**Take this 5-minute survey!**

This survey is part of an Honors thesis at CSU, exploring how young adults interpret and respond to greenwashing on social media. Your input will help inform future transparency in eco-friendly marketing.

**Requirements:**

- 18-24 years old
- Active on social media

**Scan for Survey!**



Complete survey for the chance to win a \$20 Dutch Bros Gift Card

## Appendix D: IRB Approval Letter

PROTOCOLS

**kuali**



**COLORADO STATE  
UNIVERSITY**

**The protocol listed below has been approved by the CSU IRB Determinations Fort Collins on Tuesday, October 7th 2025.**

PI: Dahl, Jamie Murphy

Submission Type and ID: Initial 7317

Title: Understanding How Young Consumers Perceive and React to Greenwashing Through Social Media

Approval Date: Tuesday, October 7th 2025

Expiration Date: no date provided

The IRB has completed its review of protocol 7317 Understanding How Young Consumers Perceive and React to Greenwashing Through Social Media . In accordance with federal and state requirements, and policies established by the IRB, the committee has approved this protocol under Exempt review.

The IRB determined that this protocol meets the criteria for exemption under category 2(i).

Risk: Minimal

Funding: Unfunded

Ongoing IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities impact the exempt determination, please submit a new request to the IRB for a determination.

If no expiration date is listed above, continuing review is not required for this study.

**What are your responsibilities now, as you move forward with your research?**

**Document Retention:** The PI is responsible for keeping all regulated documents, including IRB correspondence such as this letter, approved study documents, and signed consent forms for at least three (3) years following protocol closure for audit purposes. Documents regulated by HIPAA, such as Release Authorizations, must be maintained for six (6) years.

**Site Permission:** If your research is conducted at locations outside of Colorado State University (such as schools, hospitals, or businesses), you must obtain written permission from all sites to recruit, consent, study, or observe participants. Generally, such permission comes in the form of a letter from the school superintendent, director, or manager. You must maintain a copy of this permission with study records.

**Training:** All researchers collecting or analyzing data from this study must renew training in human subjects research via the CITI Program ([www.citiprogram.org](http://www.citiprogram.org)) every 3 years. New personnel must complete training and be added to the protocol before beginning research with human participants or their data.

**Modifications:** Change to any aspect of this protocol or research personnel must be approved by the IRB before implementation, except when necessary to eliminate apparent immediate hazards to subjects or others. In such situations, the IRB should still be notified immediately.

**Unanticipated Problems/Adverse Events:** Unanticipated problems involving risks to subjects or others, serious adverse events, and noncompliance with the approved protocol must be reported to the IRB immediately through a reportable event in [Kuali Protocols](#) in accordance with the [Reportable New Information](#) CSU IRB procedures. When in doubt, consult with the HRPP/IRB.

**Monitoring:** The HRPP reminds researchers that this study is subject to monitoring at any time by Colorado State University's HRPP staff, Institutional Review Board, Post Approval Monitoring team, or authorized external entities. Timely cooperation with monitoring procedures is an expectation of IRB approval.

**Change of Institutions:** If the PI leaves Colorado State, the study must be closed or the PI must be replaced on the study or transferred to a new IRB. Studies without a Colorado State University PI will be closed.

**Other Approvals:** This Colorado State IRB approval covers only regulations related to human subjects research protections (e.g. 45 CFR 46). This determination does not constitute approval from any other Colorado State campus departments, research sites, or outside agencies. The Principal Investigator and all researchers are required to affirm that the research meets all applicable local/state/ federal laws and university policies that may apply.

If you have questions about this determination or your responsibilities when conducting human subjects research on this project or any other, please do not hesitate to contact the IRB office at your respective campus:

CSU Fort Collins - [CSU\\_IRB@colostate.edu](mailto:CSU_IRB@colostate.edu)

CSU Pueblo - [CSUP\\_IRB@csupueblo.edu](mailto:CSUP_IRB@csupueblo.edu)

## **Attachments**

Consent Exempt\_consent.docx Statement about consent to participate in survey